REMARKS

This communication is a full and timely response to the non-final Office Action dated August 1, 2008. Claims 1-10 and 13-24 are pending. By this communication, claims 11 and 12 are canceled without prejudice or disclaimer to the underlying subject matter, claims 1, 2, and 7 are amended, and claims 13-24 are added. Support for the amended subject matter can be found, for example, at page 2, lines 15-26, of the disclosure.

In numbered paragraphs 2 and 3 on page 2 of the Office Action, claims 11 and 12 stand rejected under 35 U.S.C. §112, second paragraph for alleged indefiniteness. Applicants respectfully traverse this rejection. However, in an effort to expedite prosecution, these claims are canceled without prejudice thereby rendering this rejection moot. Withdrawal of these rejections is respectfully requested.

In numbered paragraph 4 on page 2 of the Office Action, claims 1-10 stand rejected under 35 U.S.C. §102(b) for alleged anticipation by Sussman (EP 0440384). Applicants respectfully traverse this rejection.

As shown in Figures 1-3, a radiator 10 includes a protective silicon-carbide film 18 and an amorphous carbon film 16 sequentially formed on a substrate 12. Because of the layer structure, radiator 10 exhibits high thermal emissivity in the infrared range.

Applicants' claims broadly encompass the foregoing features. For example, independent claim 1 recites the following:

> A high emissivity radiator comprising a substrate, an amorphous carbon layer and a metallic carbide layer interposed between the substrate and the amorphous carbon layer.

Contrary to the Examiner's assertions, Sussman fails to anticipate applicants' claims.

Sussman discloses a substrate 10 having a diamond film 12 bonded to a surface 14 of the substrate through a metal bonding layer 16. The metal layer 16 is deposited on the surface 14 of the substrate and the diamond film 12, then deposited on the metal layer using a chemical vapor deposition method (CVD). A layer of protective material may be sandwiched between the CVD diamond film and the metal bonding layer. A coating of a thin layer of amorphous or diamond-like carbon can be deposited on the metal layer 16 as the protective material.

While Sussman discloses that substrates having CVD diamond films deposited thereon can be used as cutting tools, heatsinks, or wear-resistant surfaces, Applicants respectfully submit that these applications are dissimilar and not analogous to the radiator as recited in Applicants' claims. For one, the surface to which the CVD diamond film is applied is a surface that is to be placed against a hot component that is to be cooled. As a result, the surface abstracts heat from the hot component through conduction. One of ordinary skill would understand this description as accurate because the coated surface 14 that is intended to transfer heat to air or another cooling medium does not include fans or other formations that would increase its surface area. For this reason, the coated surface is not intended to dissipate heat through radiation or other known means.

Secondly, Applicants respectfully submit that the amorphous or diamond-like carbon used as the protective material layer 18 in Sussman is not analogous to Applicants' claimed amorphous carbon. Sussman discloses that the purpose of coatings 12, 16, and 18 is to provide the substrate 10 with a hard wear-resistant coating. As a result, one of ordinary skill in the art would understand that to achieve

this function, the amorphous or diamond-like carbon must have a hard nano-crystalline structure.

In contrast, Applicants' claimed amorphous carbon film is defined as a soft material that can be easily scratched. See Applicants' disclosure, paragraph bridging pages 5 and 6. Based on this description, one of ordinary skill would recognize that a structure that incorporates a soft amorphous carbon film cannot be load-bearing or wear-resisting because a soft intermediate layer would fail when subjected to stress.

Furthermore, Sussman discloses a process used to firmly affix a diamond film 12 to a substrate 10 via a layer 16. If a soft (i.e., structurally weak) layer of any material between the layers 12 and 16 would undermine the formation of a rigid structure that Sussman seemingly seeks to achieve. For at least this reason, Sussman teaches away from using an amorphous carbon layer as recited in Applicants' claims.

In summary, Sussman fails to establish a *prima facie* case of obviousness because it does not disclose Applicants' claimed radiator, an amorphous carbon layer, and/or the use of a "soft" layer. Applicants remind the Examiner that to properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. *See* Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). For at least these reasons, withdrawal of this rejection is respectfully requested.

Based on the foregoing remarks, applicants respectfully submit that newly added claims 13-24 are likewise distinguishable over Sussman. Namely, these claims are allowable by virtue of their dependency and/or the combination of features

recited therein. Accordingly, favorable examination and consideration of these claims is respectfully requested.

CONCLUSION

By virtue of the foregoing amendments and remarks, applicants respectfully submit that claims 1-9 and 12-24 are allowable and this application is in condition for allowance. In the event any unresolved issues remain, the Examiner is encouraged to contact applicants' representative identified below.

Respectfully submitted,

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